This Page Is Inserted by IFW Operations and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

IN THE CLAIMS

Please cancel claims 3, 4, 7, and 9 without prejudice or disclaimer and amend the remaining claims as shown below.

1. (Currently Amended) A composite aluminium panel comprising two parallel plates and/or sheets secured to the peaks and troughs of a corrugated aluminium stiffener sheet by means of welding between the parallel plates and/or sheets, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

Mg 1.5 - 6.0

Mn 0.3 - 1.4

Zn 0.4 - <u>1.2</u> 5.0

Fe up to 0.5

Si up to 0.5

Zr up to 0.30

optionally, at least one member of the group consisting of:

Cr 0.05 - 0.30

Ti 0.01 - 0.20

V 0.05 - 0.25

Ag 0.05 - 0.40

Cu up to 0.40

other elements up to 0.05 each, 0.15 total

Al balance

and having in an H-condition or in an O-condition a ratio of PS/UTS in the range of 0.4 to 0.9 and having good roll formability.

2. (Previously Amended) A composite aluminium panel according to claim 1, wherein the corrugated aluminium stiffener sheet has a thickness in the range of up to 3.0 mm.

AMENDMENT Page 3

- 3. CANCELLED
- 4. CANCELLED
- 5. (Currently Amended) A composite aluminium panel <u>comprising two parallel</u> <u>sheets and/or sheets secured to the peaks and troughs of a corrugated aluminium stiffener sheet</u> <u>by means of welding between the parallel plates and/or sheets</u>, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

Mn 0.6 - 1.2 12

Zn 0.4 - 1.5

Zr 0.05 - 0.25

Cr up to 0.3

Ti up to 0.2

Fe up to 0.5

Si up to 0.5

Cu up to 0.4

Ag up to 0.4

balance Aluminium and inevitable impurities, and

having in an H-condition or in an O-condition a ratio of PS/UTS in the range of 0.4 to 0.9 and having good roll formability.

- 6. (Previously Amended) A composite aluminium panel in accordance with claim 1, further comprising a cladding on at least one side of the surface of the corrugated sheet and the cladding is a member of the group consisting of:
 - (i) the cladding is of a higher purity aluminium alloy than said rolled sheet;
 - (ii) the cladding is of the Aluminium Association AA1000 series;
 - (iii) the cladding is of the Aluminium Association AA6000 series;



- (iv) the cladding is of the Aluminium Association AA4000 series; and
- (v) the cladding is of the Aluminium Association AA7000 series.

7. CANCELLED

8. (Previously Amended) A composite aluminium panel in accordance with claim 1, wherein at least one of the two parallel plates and/or sheets are within the same compositional window as the corrugated aluminium stiffener.

9. CANCELLED

10. (Currently Amended) A method of use of an aluminium rolled product of composition (in weight percent):

Mg 1.5 - 6.0

Mn 0.3 - 1.4

Zn 0.4 - 1.2 5.0

Fe up to 0.5

Si up to 0.5

Zr up to 0.30

optionally, one or more of

Cr 0.05 - 0.30

Ti 0.01 - 0.20

V 0.05 - 0.25

Ag 0.05 - 0.40

Cu up to 0.40

other elements up to 0.05 each, 0.15 total

Al balance

comprising a step selected from the group consisting of:

forming the aluminium rolled product into a corrugated aluminium stiffener sheet; and



attaching the aluminium rolled product as a <u>first</u> parallel sheet or plate, to <u>said</u> a corrugated <u>aluminium stiffener</u> sheet of an aluminium alloy which is of the same or different composition as the <u>first</u> parallel sheet and/or plate in a composite aluminium panel,

attaching a second parallel sheet or plate to the corrugated aluminium stiffener sheet of an aluminium alloy which is of the same or different composition as the second parallel sheet and/or plate in the composite aluminium panel,

wherein the stiffener sheet is attached to the first and second plates or sheets by welding to have the corrugated sheet between the first and second parallel sheets or plates.

11. (Currently Amended) A method of use of an aluminium rolled product of composition (in weight percent):

Mg 5.0 - 6.0

Mn 0.6 - 1.2 12

Zn 0.4 - 1.5

Zr 0.05 - 0.25

Cr up to 0.3

Ti up to 0.2

Fe up to 0.5

Si up to 0.5

Cu up to 0.4

Ag up to 0.4

balance Aluminium and inevitable impurities

comprising a step selected from the group consisting of:

forming the aluminium rolled product into a corrugated aluminium stiffener sheet; and attaching the aluminium rolled product as a <u>first</u> parallel sheet or plate, to <u>said</u> a corrugated <u>aluminium stiffener</u> sheet of an aluminium alloy which is of the same or different composition as the parallel sheet and/or plate in a composite aluminium panel,



attaching a second parallel sheet or plate to the corrugated aluminium stiffener sheet of an aluminium alloy which is of the same or different composition as the second parallel sheet and/or plate in the composite aluminium panel,

wherein the stiffener sheet is attached to the first and second plates or sheets by welding to have the corrugated sheet between the first and second parallel sheets or plates.

- 12. (Previously Amended) A welded structure comprising at least one composite aluminium panel according to claim 1.
- 13. (Previously Amended) A composite aluminium panel according to claim 1 for ship building.
- 14. (Previously Amended) A composite aluminium panel according to claim 1 for marine offshore construction.
- 15. (Previously Added) A composite aluminium panel according to claim 1, wherein the corrugated aluminium stiffener sheet has a thickness in the range of 0.2 to 1.0 mm.
- 16. (Previously Added) A composite aluminium panel according to claim 5, wherein Zn is 0.4 0.9%.
- 17. (Currently Added) A composite aluminium panel in accordance with claim $\underline{1}$ 7, wherein the two parallel plates and/or sheets have been secured to the corrugated aluminium stiffener sheet by means of laser welding.
 - 18. (Previously Added) A method according to claim 11, wherein Zn is 0.4 0.9%.
- 19. (Previously Added) A welded structure comprising at least one composite aluminium panel according to claim 5.



- 20. (New) A composite aluminium panel according to claim 5, wherein the corrugated aluminium stiffener sheet has a thickness in the range of up to 3.0 mm.
- 21. (New) A composite aluminium panel in accordance with claim 5, further comprising a cladding on at least one side of the surface of the corrugated sheet and the cladding is a member of the group consisting of:
 - (i) the cladding is of a higher purity aluminium alloy than said rolled sheet;
 - (ii) the cladding is of the Aluminium Association AA1000 series;
 - (iii) the cladding is of the Aluminium Association AA6000 series;
 - (iv) the cladding is of the Aluminium Association AA4000 series; and
 - (v) the cladding is of the Aluminium Association AA7000 series.
- 22. (New) A composite aluminium panel in accordance with claim 5, wherein at least one of the two parallel plates and/or sheets are within the same compositional window as the corrugated aluminium stiffener.
 - 23. (New) A composite aluminium panel according to claim 5 for ship building.
- 24. (New) A composite aluminium panel according to claim 5 for marine offshore construction.
- 25. (New) A composite aluminium panel according to claim 5, wherein the corrugated aluminium stiffener sheet has a thickness in the range of 0.2 to 1.0 mm.
- 26. (New) A composite aluminium panel in accordance with claim 5, wherein the two parallel plates and/or sheets have been secured to the corrugated aluminium stiffener sheet by means of laser welding.



- 27. (New) A composite panel according to claim 1 for application in a marine environment.
- 28. (New) A composite panel according to claim 5 for application in a marine environment.
- 29. (New) A composite aluminium panel in accordance with claim 1, wherein the two parallel plates and/or sheets have been secured to the corrugated aluminium stiffener sheet by means of friction stir welding.
- 30. (New) A composite aluminium panel in accordance with claim 5, wherein the two parallel plates and/or sheets have been secured to the corrugated aluminium stiffener sheet by means of friction stir welding.
- 31. (New) A composite aluminium panel comprising two parallel plates and/or sheets secured to the peaks and troughs of a corrugated aluminium stiffener sheet between the parallel plates and/or sheets, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

Mg 1.5 - 6.0

Mn 0.3 - 1.4

Zn 0.4 - 5.0

Fe up to 0.5

Si up to 0.5

Zr up to 0.30

optionally, at least one member of the group consisting of:

Cr 0.05 - 0.30

Ti 0.01 - 0.20

V 0.05 - 0.25

Ag 0.05 - 0.40



Cu up to 0.40

other elements up to 0.05 each, 0.15 total

Al balance

and having in an H-condition or in an O-condition a ratio of PS/UTS in the range of 0.4 to 0.9 and having good roll formability.

- 32. The method of claim 31, further comprising contacting the composite panel with a marine environment.
- 33. (New) A composite aluminium panel comprising two parallel sheets and/or sheets secured to the peaks and troughs of a corrugated aluminium stiffiner sheet between the parallel plates and/or sheets, wherein the corrugated aluminium stiffener sheet is made from an aluminium alloy rolled sheet of composition (in weight percent):

Mg 5.0 - 6.0

Mn 0.6 - 1.2

Zn 0.4 - 1.5

Zr 0.05 - 0.25

Cr up to 0.3

Ti up to 0.2

Fe up to 0.5

Si up to 0.5

Cu up to 0.4

Ag up to 0.4

balance Aluminium and inevitable impurities, and

having in an H-condition or in an O-condition a ratio of PS/UTS in the range of 0.4 to 0.9 and having good roll formability.

34. The method of claim 33, further comprising contacting the composite panel with a marine environment.

